



Review on Indonesia Building Regulations and Standards

Group Session 2

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Background

- Rapid growth of urban development in Indonesia, especially in large cities, brings significant impacts on the developing areas as well as in their surroundings.
- The development of buildings and their surroundings in many urban areas becomes a significant factor in shaping and characterizing the urban form.
- Until the end of year 2002, the Government of Indonesia had not had a proper national building law.

R&S in Indonesia before '98

- Building regulations and standards in Indonesia have not thorough enough comparing to other Asian countries.
- Referring to building regulations and standards were depending on the completeness of local regulation and particularly relying upon to the commitment of architects, engineers, and also contractors
- From the total 320 municipalities, there were only 70% having local building regulations. Among those local building regulations, not more than 20% that regulated technical provisions.

R&S in Indonesia before '98

- In the year of 1996, the Government of Indonesia and the Government of Australia had signed a MOU on harmonization regulations and standards
- By the end of 1998, the Minister of Public Works enacted the Indonesian Building Codes.
- Due to limited technical standards should be referred, using international standards are recommended.

Law No. 28/2002 on Buildings

- The draft of a national building regulation had been set up since 1964, and just legalized on 16 December 2002 as the Law of the Republic of Indonesia No. 28 year 2002 regarding Buildings.
- The law regulates:
 - building functions,
 - building requirements,
 - building process,
 - role of the community,
 - role of government, and
 - sanction.

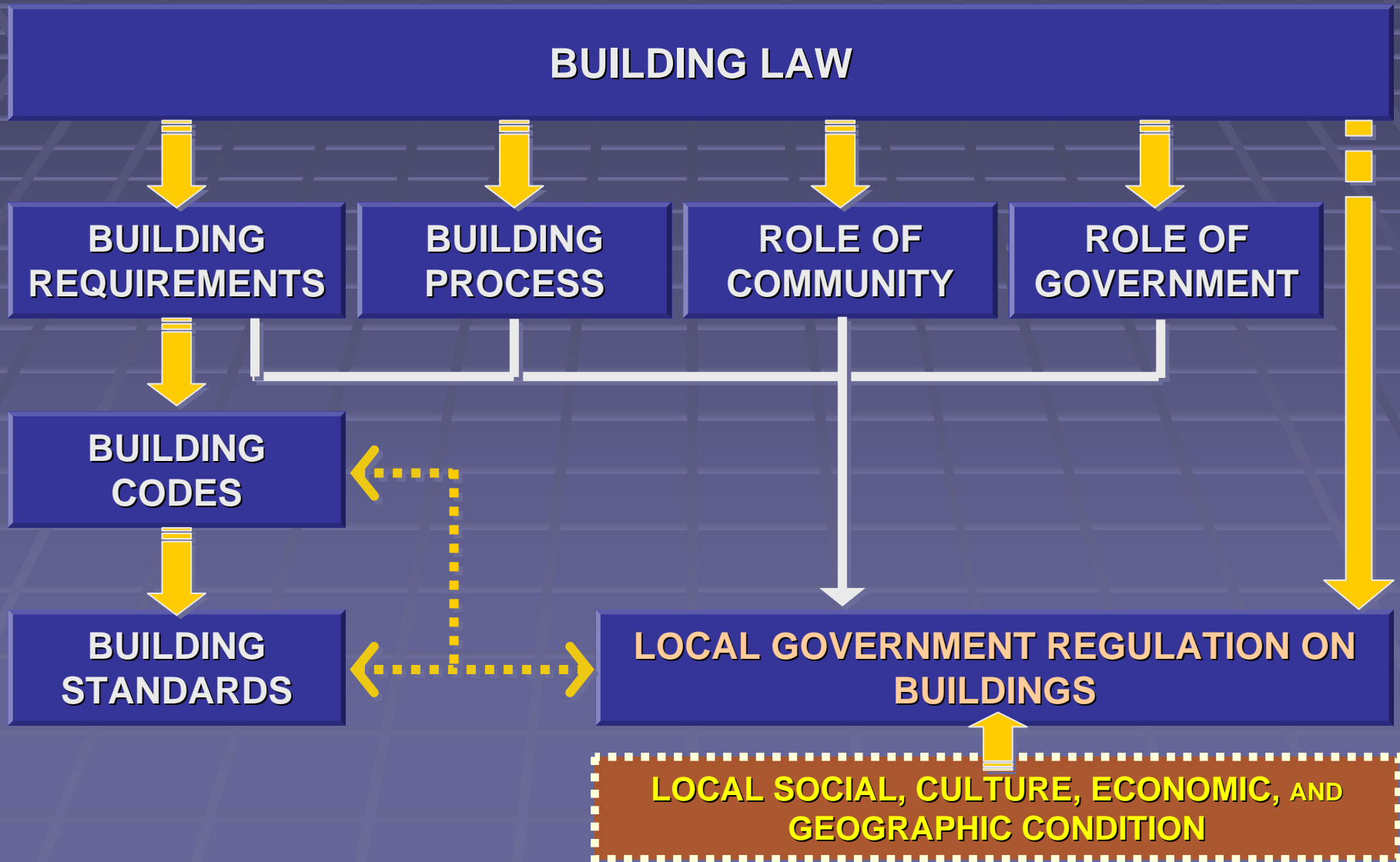
Law No. 28/2002 on Buildings

- By the enforcement of this law, all building constructions carried out in the territory of the Republic of Indonesia are obliged to comply with all the provisions in the Law.
- The law regulates the principle and normative matters, and the provisions on its implementation will further be laid down by Government Regulation and/or other statutory regulations and standards, including Local Government Regulation.

Indonesia R&S in the future

- Based on the provisions regulated in the Building Law and the Construction Services Law, the government and others professionals need to review and improve all previous regulations and standards related to buildings process.
- Frame / the structure of building regulations and standards have been improved, including taken out its into a family tree of building regulations.
- In the year of 2002, the number of standards in Indonesia concerning with building construction were 269 of total 747 standards that related to public works.

Family Tree of Building Regulations



The criteria of reviewing and developing Indonesia regulations and standards:

- should be in accordance with the Building Law and other related laws,
- should establish orderly developments and produce durable buildings,
- should appropriate towards local conditions,
- should consider towards harmonization among Asia-Pacific countries regulations and standards.



Thank You



Thank You

NATIONAL BUILDING REGULATIONS AND STANDARDS REVIEW AND IMPROVEMENT IN INDONESIA

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Group Session 2: Standard Practices for Building Process in Asia
Tokyo, 27-29 January 2004

1. Background

Rapid growth of urban development in Indonesia, especially in large cities, brings significant impacts on the developing areas as well as in their surroundings. For more than two decades such developments have especially been occurring in sectors of industry, housing and settlements, tourism, and trades.

Due to increasing growth of economic activities and the resultant physical development throughout Indonesia, (especially in big cities and in areas having potential for economic development), a marked increase in the pace of urbanization and physical development of cities and their hinterlands has occurred in recent years. Similar trends have taken place in many media and small towns, referred to as secondary cities.

The development of buildings and their surroundings in many urban areas becomes a significant factor in shaping and characterizing the urban form. In conjunction with the increased economic development in Indonesia, many other sectors of developments indicate a considerable increased progress as well, for example, of physical development on public amenities, mainly of those were being built in areas of strong economic potentials.

This trend is continually being followed by the increasing growth of various types of building development whether they are located in the central business area of the city or on its periphery. Subsequently, not longer than a decade, dramatic changes have been occurred in many urban areas. Similar occurrences and cases take place in most Indonesian cities.

It is expected that the acceleration of the city growth should be guided and controlled by the implementation of appropriate building regulations and building standards. Unfortunately, until the end of year 2002, the Government of Indonesia had not had a proper national building law which can be used as an umbrella in developing any building regulations and standards. These types of regulations and standards are mostly needed in cities or areas which have fast growth in building constructions.

In the long term, these regulations and standards can be applied as a development control in the process of design and construction of any new buildings that being proposed to be built, while the compatibility, continuity and harmony with respect to the existing buildings and future development can be achieved. In this context, it is necessary that the provision of a comprehensive development plan that covers all factors of urban design guidelines, building regulations, and building standards is urgently demanded.

2. The Conditions of National Building Regulations and Standards in Indonesia before 1998

In general, the building regulations and standards in Indonesia have not thorough enough comparing to other Asian countries such as Singapore, Malaysia, and Japan. Furthermore, the existing building regulations and standards are rather out of date comparing to the growth of technology. Natural disaster such as volcanic explosion, mudflow, earthquake, tsunami, landslide, and dust rain, or fire hazards which can happen at any time, can even reach the major regional cities of very dense population. The handling of urban basic infrastructure development management must therefore be based on this consideration.

At that time, referring to building regulations and standards were depending on the completeness of local regulation and particularly relying upon to the commitment of architects, engineers, and also contractors who build the building construction. Unfortunately, the conditions of local regulations among more than 320 municipalities were very poor on technical provisions. Consequently, some of building constructions were uncontrollable by the local government concerning with the building affordability, especially of building safety.

From the total 320 municipalities, there were only 70% having local building regulations. Among those local building regulations, not more than 20% that regulated technical provision, and only less than 5% regulated fire safety provision. The rest of them solely regulated building permit process and its permit fees.

The regulations did not have clause about proper sanction (there were no clause regarding to an adequate sanction or penalty) for any builders who failed to obey the technical standards. Any building owner and/or user who failed to meet the function obligations, and/or the requirements and/or building construction, should not be subject to an appropriate sanction or penalty. In the local regulation, the maximum penalty could be applied which not more than 5 million rupiah (approximately US\$ 600).

As long as such various types of buildings have fulfilled technical standards for security on fire safety, for instance, they seem to be approved by the local authority and have no critical problems. The actual occurrences and cases are, however, not always in

accordance with the expected requirements of buildings. For example, frequent fire occurred in many cities illustrate unsecured conditions of buildings. There must be some technical standards that have not been achieved that buildings unable to cope with fire hazard.

In the year of 1996, the Government of Indonesia and the Government of Australia had signed a memorandum of understanding on harmonization regulations and standards, especially regarding on the construction industry. Based on this MOU, the Ministry of Public Works of Indonesia together with universities, professional associations, local governments, and other related parties developed a draft of Indonesia building code. By the end of 1998, the Minister of Public Works enacted the Indonesian Building Codes through a minister decree, number 441/KPTS/1998. This code is consisting of provisions of as follow:

- building occupancy and intensity,
- architecture and its environment,
- structure,
- fire protection,
- accessibility,
- emergency lighting, exit signs, and warning systems,
- electrical, lighting prevention, and communication installation in buildings,
- gas installation,
- sanitation in building,
- ventilation and air conditioning,
- lighting installation, and
- noise and vibration.

The building codes regulate general provisions of those items. In detail, this code indicates to technical standards that should be referred. Due to limited technical standards should be referred (total technical standards which related to buildings were not more than 200 articles, and some of them were actually out of date). Up to the present moment, using international standards are recommended. Therefore, some professionals seemingly prefer to apply international standards such as JIS, ASTM, NFPA, and AS.

3. The Law of the Republic Indonesia No. 28 Year 2002 Regarding Buildings.

The draft of national building regulation had been set up since 1964, and just legalized on 16 December 2002. This law shall take effect one (1) year as of the date of its enactment.

The law regarding buildings regulates the building functions, requirements, construction, including the rights and obligations of the owner and user of the building

in every phase of its construction, the provisions on the role of the community in the process of development, the technical guidance by the government, the sanction, transitional and closing clauses.

All purposes and objectives of regulation are, especially, laid on the principle of usefulness or benefit, safety, sense of balance, and harmony of the buildings with their surroundings for the benefit of the community who uphold humanity and justice.

Efforts are made to involve the community in taking significant role in not only during the process of the development and utilization of buildings for their own benefit, but also in the fulfillment of building requirements and in achieving orderly construction of buildings in general.

The shape of buildings is not apart from the role of construction service providers based on the laws and regulations on construction services, either as planners, constructors, supervisors or managers, or other development services, including the providers building technical appraisal services. For that reason, building arrangement within particular areas should be compulsory regulated in line with the arrangement of construction services as well as in accordance with the current valid laws and regulations.

By the enforcement of this law, all building constructions carried out in the territory of the Republic of Indonesia by the government, private sectors, the community, and foreigners, are obliged to comply with all the provisions contained in the aforementioned Law on Buildings.

In anticipating and dealing with the advanced technology, either in information, architecture, and engineering, it is necessary to apply it proportionally, by constantly considering the social and cultural values of the local community, and the existing architectural characteristics and environment, especially towards the contextual, traditional, specific, and historical values.

The arrangement in this law also requires the consideration of heterogeneous social, economic, and cultural condition of Indonesian people. In connection with the foregoing, the government continuously encourage, empower the people and their ability in complying with the requirements of this law step by step, so that the assured security, safety, and health of the people in the construction of buildings can be enjoyed by all parties equitably and inspired by the spirit of humanity, togetherness, and mutual cooperation, as well as good governance.

This law regulates the principle and normative matters, and the provisions on its implementation will further be laid down by Government Regulation and/or other statutory regulations and standards, including Local Government Regulation, by

constantly considering the provisions of other laws related to the implementation of this Law.

4. Indonesia Building Regulations and Building Standards in the future

Facing the globalization and AFTA, harmonization on standardization among Asia Pacific Countries is necessary. Based on the provisions regulated in the building law and the construction services law, the government and others professionals need to review and improve all previous building regulations and standards related to buildings process. Some standards have been improved and issued, especially standards on fire protection, technical specification, method, and testing. Frame / the structure of building regulations and standards have been improved, including taken out its into a family tree. This family tree will be used as a good frame work for setting up and reviewing all regulations and standards of building construction process in Indonesia.

After legalizing the Indonesia Building Law, the Government and related parties are currently finalizing the four government regulations as further regulations of the Laws. These regulations are essentially related to building provisions (administrative and technical requirements), building process (design, construction, utilization, preservation, and demolition), community role in building process, and government role in the building development process. Simultaneously all local governments, which are now about 400 municipalities, should revise or set up their local building regulations, so that their regulations will be in accordance with the provisions as written in the Building Law.

In the year of 2002, the number of standards in Indonesia concerning with building construction were 269 of total 747 standards that related to public works. Those standards consist of the provisions of:

- Concrete: 71 articles (16 specifications, 11 methods, 44 testing),
- Aggregate : 29 articles (7 specifications, 2 methods, 20 testing),
- Portland Cement : 6 articles (6 testing),
- Timber: 30 articles (4 specifications, 4 methods, 22 testing),
- Other Materials : 32 articles (17 specifications, 6 methods, 9 testing),
- Housings and Buildings : 44 articles (10 specifications, 32 methods),
- Building Structure: 18 articles (6 specifications, 5 methods, 7 testing),
- Building Safety: 39 articles (9 specifications, 18 methods, 7 testing).

In the mean time, there are about 30 drafts of standards (drafts of Indonesia National Standards / RSNI) which will be proceed as SNI soon, and in the year of 2003-2004 the Government of Indonesia will be developing about 91 new standards with reference to housings and buildings. Obviously, when developing or revising these standards, the initiator should take into account the condition of geography, socio-culture, and climate in Indonesia, as well as should refer to the International standards.

In order to be of special concern to the contents of the Building Laws, the Ministry of Settlements and Regional Infrastructure (it was, formerly, the Ministry of Public Works) initiate to revise the Indonesia Building Codes. Therefore, in the next two or three years, all local building regulations and standards will hopefully be consistent to all provisions of the Building Laws. The code also will be improved from a prescriptive based approach into a performance based approach.

The criteria of reviewing and setting up of those regulations and standards are as follow:

- should be in accordance with the Building Law and other related laws.
- should establish orderly developments and produce durable buildings.
- should appropriate towards local conditions such as extreme tropical climate, perishable to natural disaster as well as to fire hazards.
- should consider towards harmonization among Asia-Pacific countries regulations and standards.

Jakarta, 20 January 2004.